



MEMO

Mayor and Council –

FYI on our efforts
concerning Streambank
Stablization.

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TO: JEFF HERCZEG, DIRECTOR OF PUBLIC WORKS
FROM: REBECCA RUNKEL, PROJECT ENGINEER
SUBJECT: MIDDLE ROUGE STREAMBANK PROJECT UPDATE
DATE: DECEMBER 14, 2023

The Middle Branch of the Rouge River runs southeast through Novi from Walled Lake to the City boundary with Northville at 8 Mile Road and Novi Road. In 2013, the City hired a consultant to assess streambank conditions of the Middle Rouge River downstream of Grand River Avenue to the southern City limits. The results of the streambank assessment were used to identify areas of concern for potential Capital Improvement Program projects (CIP). The design of one of those projects, Middle Rouge Streambank Stabilization, North of 10 Mile Rd to Novi Rd, was recently awarded to engineering consultant OHM Advisors at the [September 25, 2023 City Council meeting](#).

Prior to the design award, OHM had conducted a feasibility study for design of this section where they collected data and provided a conceptual design. The design involved streambank stabilization, floodplain connection, and bioengineering concepts to reduce sediment loading and transport resulting from soil erosion. One of the concepts proposed involved a novel bioengineering technique ('channel-spanning woody structures') that has not yet been used in Michigan.

Since the project would need to be permitted by the State, the City, and OHM met with staff from the Michigan Department of Environment, Great Lakes and Energy (EGLE) and the Department of Natural Resources (DNR) on two occasions over the past year to review the site and discuss the concepts being proposed. Based on feedback from EGLE and the DNR, permitting the concepts would be costly and time-consuming. Staff decided not to pursue the novel bioengineering technique. Further consideration concluded that typical streambank stabilization measures may be ineffective after five to ten years given the topography of the area and the limited amount of space to work adjacent to the streambank.

OHM is also providing engineering services for the Meadowbrook Lake dredging project currently under construction. The Middle Rouge River passes through Meadowbrook Lake and deposits sediment at the tributary to the lake. Staff determined these periodic dredging (every 10-15 years) of sediments in the lake is the most economical use of Drain funds to address the transportation of upstream sediment. Therefore, City staff has decided to discontinue this streambank project.

City staff plans to monitor the section of streambank in question over the next several years, along with the associated downstream deposition of sediment in Meadowbrook Lake. Although design of the project was awarded, no design funds were used to date. Funds budgeted for the streambank project will be reallocated to other drainage projects in the upcoming CIP budget cycle.